

ALPHA 91B

PART DESCRIPTION	PART #	SCHEMATIC SYMBOL
BLOWER 115V (COMPLETE ASSEMBLY)	91B-AHX-X002	B1
BLOWER MOTOR 115V	BLX-X129	
BLOWER SQUIRREL CAGE	BLX-X104	
BLOWER HOUSING	BLX-X106	
BLOWER FINGER GUARD	BLX-X303	
BLOWER MOTOR SUPPORT PLATE	MSX-X018	
BLOWER BASE PLATE		
BLOWER NEOPRENE STRIP	XKX-X118	
BLOWER BASE PLATE	91B-MSX-1102	
BOARD CONTROL-UNSTUFFED (REV 2.4)		
BOARD CONTROL-STUFFED (REV 2.4)	91B-ABX-X001	
BOARD DISPLAY-UNSTUFFED (2.2)		
BOARD DISPLAY-STUFFED (2.2)	91B-ABX-X002	
BOARD PWR SUPPLY-UNSTUFFED		
BOARD PWR SUPPLY-STUFFED	91B-ABX-X003	
BOARD HV FILTER-UNSTUFFED (REV 2.2)		
BOARD HV FILTER-STUFFED (REV 2.2)	91B-ABX-X004	
BOARD WATTMETER-UNSTUFFED		
BOARD WATTMETER-STUFFED	91B-ABX-X005	
BOARD INPUT-UNSTUFFED		
BOARD INPUT-STUFFED	91B-ABX-X006	
BOARD MAINS-UNSTUFFED (REV 2.1)		
BOARD MAINS-STUFFED (REV 2.1)	91B-ABX-X007	
CAPACITOR 33uF 35V (MAINS BRD)		C1
CAPACITOR 2.2nF 1.6KV (AC INPUT)		C4,C5
CAPACITOR 2nF 3KV (AC INPUT)	CDX-2022	C4,C5 (UNIT)
CAPACITOR 1nF (RCA JACK)	CKM-1021-C	C1-C3
CAPACITOR .02uF 500V (RF SECT)		C6-C9,C12,C13
CAPACITOR .02uF 1KV (RF SECT)	CDX-2030-C	C6-C9,C12,C13 (BRD)
CAPACITOR .02uF 1KV (RF SECT)	CDX-2030-C	C14
CAPACITOR 2nF 6KV (RF SECT)	CDX-2021	C17
CAPACITOR 2.2nF 3KV (RF SECT)		C16
CAPACITOR 2nF 3KV (RF SECT)	CDX-2022	C16 (UNIT)
CAPACITOR 6.8nF 3KV (RF SECT)		C15
CAPACITOR 2nF 6KV (RF SECT) (2 IN PARALLEL)	CDX-2021	C15 (UNIT)
CAPACITOR .002uF 6KV (RF SECT)	CDX-2021	C19
CAPACITOR .0047uF 5KV DOORKNOB (RF SECT)	91B-CDX-4720-C	C18
CAPACITOR .0033uF 5KV DOORKNOB (RF SECT)		C18
CAPACITOR 11nF (BUILT INTO TUBE SOCKET)		C10,C11
CAPACITOR 22nF 500V (BAND LOCKOUT)		C1
CAPACITOR 1.5nF 1KV (FEEDTHROUGH)	CKX-1520	C15,C25
CAPACITOR 100pF 6KV (RF SECT)	91B-CDX-1012-B	C21-C24
CAPACITOR 22pF (RF SECT)	91B-CDX-2200-B	C27
CAPACITOR 150pF 8KV (PAD CAP PCB)	CDX-1510-A	C1-C8 (C9 WITH MOD.)
CAPACITOR .02uF 500V (RF FILL 1 PCB)		C1
CAPACITOR .02uF 1KV (RF FILL 1 PCB)	CDX-2030-C	C1(BRD)
CAPACITOR .01uF (CNTRL BRD)	CKM-1030	C2,C5-C7,C10-C13,C18,C28-42,C48-C54,C65 C68,C70
CAPACITOR 10uF 35V TANT (CNTRL BRD)	CLX-1060	C67
CAPACITOR 10uF 63V (CNTRL BRD)	CEX-1065-C	C44,C60,C63,C64,C66
CAPACITOR .1uF (CNTRL BRD)	CKM-1040	C4,C9,C20,C22,C26,C62
CAPACITOR 2200uF 35V RADIAL (CNTRL BRD)	CEX-2282-C	C59
CAPACITOR 470uF 35V RADIAL (CNTRL BRD)		C58
CAPACITOR 1uF 35V TANT (CNTRL BRD)	CLX-1050	C14,C16,C57, C56
CAPACITOR .001uF (CNTRL BRD)	CKM-1021-C	C1,C3,C8,C15,C19,C21,C43,C45-C47
CAPACITOR .02uF (CNTRL BRD)		C23
CAPACITOR .022uF (CNTRL BRD)	CKM-2230-C	C23(BRD)
CAPACITOR .01uF (CNTRL BRD)	CKM-1030	C23(BRD)
CAPACITOR .33uF (CNTRL BRD)	CKM-3340-D	C27
CAPACITOR 22uF 15V TANT (CNTRL BRD)	CLX-2260 (see note C17)	

To fix most time-delay failures, replace C17 with higher voltage rated part. Use CLX-2262

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CAPACITOR 1uF 100V ELEC (CNTRL BRD) Change C56 to CLX-1050 Tantalum, more reliable.	CEX-1051-C	C56,C61
CAPACITOR .47uF 50V (CNTRL BRD)	CKM-4740-C	C24
CAPACITOR .1uF (DSPLY BRD)	CKM-1040	C1,C3-C14,C23
CAPACITOR .01uF (DSPLY BRD)	CKM-1030	C15-C22
CAPACITOR .01uF (PWR SUPPLY)	CKM-1030	C3
CAPACITOR 33uF 25V RADIAL (PWR SUPPLY)	CEX-3360-C	C2
CAPACITOR .01uF 400V (PWR SUPPLY)		C5
CAPACITOR .01uF 500V DISC (PWR SUPPLY)	CKD-1031	C5
CAPACITOR 33uF 250V AXIAL (PWR SUPPLY)		C1,C4
CAPACITOR 2.2nF 3KV (HV FILTER)		C1,C13(BRD)
CAPACITOR .002uF 6KV (HV FILTER) (use CDX-2021)	CDX-2021	C1,C13(BRD)
CAPACITOR 4.7uF 450V AXIAL (HV FILTER)	CEX-4751-C	C14
CAPACITOR 100uF 500V (HV FILTER)	CEX-1076-C	C11
CAPACITOR 220uF 400V (HV FILTER)	CEX-2271-C	C2-C10
CAPACITOR .001uF (RF INPUT)	CKM-1021-C	C1,C2,C5
CAPACITOR 82pF (RF INPUT)	CDX-8200-B	C4
CAPACITOR 22pF (RF INPUT) Change to below	CDX-2200-B	C3
CAPACITOR 10pF (RF INPUT) (Hi-pwr diode mod)	CDX-1000-B	C3
CAPACITOR .022uF (RF INPUT)	CKM-2230-B	C6,C9
CAPACITOR 47pF (RF INPUT)	CDX-4700-B	C7,C8
CAPACITOR .001uF 50V (RF OUTPUT)	CKM-1021-C	C1-C6
CAPACITOR 100pF 1KV (RF OUTPUT)		C8
CAPACITOR 4.7pF 3KV (RF OUTPUT)	CKD-47G0	C7,C8
CAPACITOR 15-60pF VAR (RF OUTPUT)	CVX-6000	C9
CAPACITOR 60-200pF TUNE	91B-CTX-2110	C20
CAPACITOR 35-425pF LOAD	91B-CTX-8210	C26
CHIMNEY (4CX800A)	APP-X217	
COVER (WRAPPER)	91B-MSX-1101	
DIODE 1N4004 (RF FILL 1 BRD)	DRX-X102	D1-D3
DIODE 1N5711 (RF OUTPUT WATTMETER)	DRX-X104	D1-D4
DIODE 1N5711 (RF INPUT)	DRX-X104	D1,D2
DIODE 1N5250B (OUTPUT WATTMETER)	DZX-X149	D5
DIODE 1N4007 (PWR SUPPLY)	DRX-X128	D1-D8
DIODE KD202P (PWR SUPPLY)	91B-DRX-X146	D12-D31
DIODE ZENER 1N5349 12V (PWR SUPPLY)	DZX-X124	D9
DIODE ZENER 1N5363 30V (PWR SUPPLY)	DZX-X114	D10,D11,D32,D33
DIODE LED GREEN .1 X .2 (DSPLY BRD)		D1-D16,D21-D27,D31-D50
DIODE LED RED .1 X .2 (DSPLY BRD)		D17-D20,D28-D30
DIODE LED GREEN (DSPLY BRD)	DLX-X122	D51,D53,D54,D56
DIODE LED RED (DSPLY BRD)	DLX-X123	D52,D55,D58
DIODE LED YELLOW (DSPLY BRD)	DLX-X124	D57
DIODE 1N4004 (CNTRL BRD)	DRX-X102	D7-D9,D11,D16,D20,D21,D30-D32
DIODE 1N4148 (CNTRL BRD)	DRX-X107	D1-D6,D12,D13,D14,D15,D17-D19,D23,D25,D35
DIODE ZENER 1N4740 10V (CNTRL BRD)	DZX-X102	D22,D24,D33
DIODE ZENER 1N4733 5.1V (CNTRL BRD)	DZX-X101	D10
DIODE 1N5408 (CNTRL BRD)	DRX-X131	D26-D29
DIODE 1N4007 (AC MAINS BRD)	DRX-X128	D1
DIODE 1N5408 (TUBE DECK)	DRX-X131	D1
DIODE 1N4007 (TUBE DECK)	DRX-X128	D2
DIODE ZENER 1N4733 5.1V (HV FILTER)	DZX-X101	D6 (+360 supply D6)
DIODE ZENER 1N5363 30V (HV FILTER)	DZX-X114	D3,D5,D6 (lp MON D6)
DIODE ZENER 1N5383 150V (HV FILTER)	DZX-X148	D2,D4
DIODE ZENER 1N4757 51V (HV FILTER)	DZX-X104	D1
FRONT PANEL ASSEMBLY	91B-ARX-X229	
FRONT PANEL	91B-MSX-1100	
FRONT SUBPANEL	91B-MSX-1104	
FUSE 20A 250V CERAMIC	FSX-X109	F1,F2
FUSE 2A 250V GLASS SLOW BLOW	FSX-X111	F3,F4
GROMMET (TUBE DECK) NEW STYLE	HGX-X103	
GROMMET (TUBE DECK) OLD STYLE	HGX-X106	
HEADER MTA 3 PIN (LARGE) (CNTRL)	JAX-X725	JP5
HEADER MTA 8 PIN (CNTRL)	JAX-X708	JP1,JP4
HEADER MTA 18 PIN (CNTRL)	JAX-X714	JP6
HEADER 10 X 2 (CNTRL)	JMX-X155	JP2
HEADER 10 X 2 CURVED (DSPLY)	JMX-X099	J1
HEADER MTA 3 PIN (HV FILTER)	JAX-X303	J5

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HEADER MTA 4 PIN (HV FILTER)	JAX-X304	J4
HEADER MTA 3 PIN (WATTMETER)	JAX-X303	J1
HEADER MTA 5 PIN (INPUT)	JAX-X305	JP1,JP4
HEADER MTA 8 PIN (MAINS)	JAX-X708	J1
HV CROWBAR		
IC LM3914 LED DRIVER (DSPLY BRD)	UCX-X064	U1,U2,U5
IC LM324 OP-AMP (CNTRL BRD)	UCX-X114	U1-U4
IC 14093 NAND (CNTRL BRD)	UCX-X104	U5-U7
IC 14066 SWITCH (CNTRL BRD)	UCX-X030	U8
INDUCTOR 470uH (BARE WIRE) (DSPLY)		L1-L3
INDUCTOR 4T (RF INPUT)		L1
INDUCTOR 5.5T (RF INPUT)		L2
INDUCTOR 9.5T AIR CORE (RF INPUT)		L1/L2(BRD)
INDUCTOR 1mH IRON CORE (RF OUTPUT)		L1
INDUCTOR 38T (RF OUTPUT)		
INDUCTOR 1mH (BAND LOCKOUT)	LCX-X106	L1
INDUCTOR 1mH (RF SECT)	LCX-X106	L11,L12
INDUCTOR LOCKOUT CHOKE (RF SECT)	91B-ACX-X006	L9
INDUCTOR PI COIL 10m (RF SECT)	91B-ACX-X001	L7
INDUCTOR PI COIL 160m (RF SECT)	91B-ACX-X002	L8
INDUCTOR L COIL (RF SECT)	91B-ACX-X003	L10
INDUCTOR 10uH (RF FILL 1 PCB)		L1
INDUCTOR 1mH (TUBE DECK)	LCX-X106	L1,
INDUCTOR PARASITIC CHOKE (RF SECT)	91B-ACX-X004	L2,L3
INDUCTOR PLATE CHOKE (RF SECT)	91B-ACX-X005	L4
Like 99 plate choke, 92 t on top, 100 t on bottom.		
INDUCTOR 15uH (RF SECT)	LCX-X101	L6(BRD)
INDUCTOR 15uH (RF SECT)	LCX-X102	L6(BRD)
KNOB TUNE/LOAD	SKX-X102	
KNOB BANDSWITCH	SKX-X103	
MANUAL	ZMX-X151	
RCA JACK (REAR CHASSIS)	JCX-X126	J2-J4
RELAY IP GUARDIAN 1575-1C-24D (HV FILTER)	KDX-X115	K1
RELAY IP MAGN W178RE1-24DC (HV FILTER)	KDX-X115	K1
RELAY AC ON (MAINS BRD)	KDX-X137	K1 (SINGLE OMRON LY4ZF)
RELAY STEP-START (MAINS BRD)	KDX-X137	K2 (SINGLE OMRON LY4ZF)
RELAY AC ON (MAINS BRD) (QTY 2)		K1 (DOUBLE OMRON LY2ZF)
RELAY STEP-START (MAINS BRD) (QTY 2)		K2 (DOUBLE OMRON LY2ZF)
RELAY KEYING BYPASS TQ2E (CNTRL)	KDX-X124	K1
RELAY T/R VACUUM (RF SECT)	KVX-X105	K1
RELAY TQ2E (RF INPUT)	KDX-X124	K1,K2
RESISTOR 390 OHM 1/4W (DSPLY BRD)	RFF-B391-C	R12-R19
RESISTOR 1.21K OHM 1% (DSPLY BRD)	RFM-B1211-A	R1,R2,R5,R9,R10
RESISTOR 220K OHM 1/4W (DSPLY BRD)	RFF-B224-C	R4,R7,R8
RESISTOR 22K OHM 1/4W (DSPLY BRD)	RFF-B223-C	R20
RESISTOR 330 OHM 1/4W (DSPLY BRD)	RFF-B331-C	R6
RESISTOR 5K OHM (POT.) (DSPLY BRD)		R11,R13
RESISTOR 8.2K OHM 5W WW (PWR SUPPLY)	RFW-G822-C	R2,R3
RESISTOR 1K OHM 2W (PWR SUPPLY)	RFC-E102-C	R1
RESISTOR 511K OHM 1W (PWR SUPPLY)		R4,R23
RESISTOR 220K OHM 1/4W (RF INPUT)	RFF-B224-C	R1
RESISTOR 2.7K OHM 1/4W (RF INPUT)	RFF-B272-C	R2
RESISTOR 100 OHM 2W 1% (RF OUTPUT)	RFM-E1000-A	R1,R2,R7,R8
RESISTOR 332K OHM 1% (RF OUTPUT)	RFM-B33231-A	R3,R4
RESISTOR 68.1K OHM 1% (RF OUTPUT)	RFM-B6812-A	R5,R6
RESISTOR 1MEG OHM 2W (RF SECT)		R9-R11
RESISTOR 220 OHM 2W (PARASITIC) (QTY 4)	RFC-E221-D	R3,R7
RESISTOR 220 OHM 3W (PARASITIC) (QTY 2)	RFM-F2200-C	R3,R7
RESISTOR 47 OHM 2W (TUBE DECK)	RFC-E470-C	R8
RESISTOR 1MEG OHM 1/4W (CNTRL)	RFF-B105-C	R4,R67,R70,R71,R73,R84
RESISTOR 10K OHM 1/4W (CNTRL)	RFF-B103-C	R12,R13,R15R18,R19,R29,R32,R34,R44,R48 R50,R51,R55-R57,R66,R72,R75,R76,R79,R85 R87,R108
Change R34 to 100 ohm RFF-B101-C		
RESISTOR 100K OHM 1/4W (CNTRL)	RFF-B104-C	R3,R11,R14,R33,R36,R37,R40,R45,R54,R64,R78 R81,R93,R100-R102,R109

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(R105 was originally 100k)

RESISTOR 15K OHM 1/4W (CNTRL) (R105 was originally 100k) June 04 changed R105 and C3, lower V on Input Diodes.	RFF-B153-C	R105
RESISTOR 3.9MEG OHM 1/4W (CNTRL)	RFF-B395-C	R26,R53,R69
RESISTOR 62K OHM 1/4W (CNTRL)	RFF-B623-C	R111
RESISTOR 120K OHM 1/4W (CNTRL)	RFF-B124-C	R23,R24,R90
RESISTOR 100K OHM "100KV" (POT.) (CNTRL)	RKX-1040	R8,R16,R31,R41,R49,R52,R61,R62,R68,R92,R25 R110
RESISTOR 22K OHM 1/4W (CNTRL)	RFF-B223-C	R21,R80
RESISTOR 100 OHM 1/4W (CNTRL)	RFC-B101-C	R20
RESISTOR 150K OHM 1/4W (CNTRL)	RFF-B154-C	R89,R95
RESISTOR 20K OHM 1/4W (CNTRL)	RFF-B203-C	R95 (EBS MOD.-1998)
RESISTOR 1K OHM 1/4W (CNTRL)	RFC-B102-C	R10,R17,R39,R65,R82,R88,R94,R97,R114
RESISTOR 220K OHM 1/4W (CNTRL)	RFF-B224-C	R2,R6,R9,R22,R42,R86
RESISTOR 33K OHM 1/4W (CNTRL)	RFF-B333-C	R37,R46,R112
RESISTOR 47K OHM 1/4W (CNTRL)	RFF-B473-C	R63,R74,R103,R104
RESISTOR 1.8K OHM 1/4W (CNTRL)	RFF-B182-C	R7
RESISTOR 68K OHM 1/4W (CNTRL)	RFF-B683-C	R106
RESISTOR 4.7K OHM 1/4W (CNTRL)	RFF-B472-C	R1,R47
RESISTOR 10MEG OHM 1/4W (CNTRL)	RFF-B106-C	R5,R6,R28
RESISTOR 470K OHM 1/4W (CNTRL)	RFC-B471-C	R27
RESISTOR 100 OHM 1/4W (CNTRL)	RFC-B101-C	R58,R83,R96
RESISTOR 56K OHM 1/4W (CNTRL)	RFF-B563-C	R60
RESISTOR 39 OHM 1/4W (CNTRL)	RFF-B390-C	R43
RESISTOR 47 OHM 1/4W (CNTRL)	RFF-B470-C	R38
RESISTOR 3.3K OHM 2W (CNTRL) changed, see next line	RFC-E332-C	R59
RESISTOR 2.2K OHM 2W (CNTRL) Changed by ECO	RFO-E222-C	R59
RESISTOR 5.6K OHM 1/4W (CNTRL)	RFC-B562-C	R35
RESISTOR 390 OHM 1/4W (CNTRL)	RFC-B391-C	R77
RESISTOR 300 OHM 5W (CNTRL)	RFW-H301-C	R113
RESISTOR 560 OHM 2W (MAINS)	RFC-E561-C	R1
RESISTOR 600 OHM 10W (MAINS)	RFW-J601-D	R3
RESISTOR 680 OHM 10W (MAINS)		R3
RESISTOR 750 OHM 10W (MAINS) (TUM15J750)		R3 (REPLACEMENT)
RESISTOR 1K OHM 10W (MAINS)	RFW-J102-A	R2
RESISTOR 200 OHM 2W (MAINS)		R6
RESISTOR 10 OHM 15W (MAINS) (TUW15J10R)		R4,R5
RESISTOR 50 OHM 90W (TUBE DECK)	RLX-X103	R1
RESISTOR 47 OHM 2W (SCREEN/FILAMENT BRD)	RFO-E470-D	R8
RESISTOR 12 OHM 5W (TUBE DECK)		R2,R6,R9,R22,R42,R86
RESISTOR 12 OHM 10W 10% (TUBE DECK)	RFL-J120-D	R2,R6
RESISTOR 50K OHM 6W (TUBE DECK) (3 150K-PARALL.)		R4,R5
RESISTOR .1 OHM 5W (TUBE DECK) OLD REV.	91B-RFW-H100-C	R6
RESISTOR .2 OHM 3W (TUBE DECK) (2 IN PARALLEL)	RFM-F20B-C	R6
RESISTOR 10K OHM "10KV" (POT.) (ALC)		R12
RESISTOR 10 OHM 1/2W (HV FILTER)	RFC-C100-C	R22(SCHEMATIC)=R21(BOARD)
RESISTOR 12K OHM 2W (HV FILTER)	RFO-E123-C	R21(SCHEMATIC)=R20(BOARD)
RESISTOR 15 OHM 1/2W (HV FILTER)	RFC-C150-C	R19,R18
Change R19 to 15 OHM 1W FLAMEPROOF (HV FILTER)	RFM-D1500-C	R19
RESISTOR 10 OHM 16W (HV FILTER)	RFW-K100-D	R1,R13
RESISTOR 1K OHM 2W (HV FILTER)	RFC-E102-C	R12
RESISTOR 1K OHM 1W (HV FILTER)	RFC-D102-C	R11
RESISTOR 10K OHM 1/4W (HV FILTER)	RFF-B103-C	R17
RESISTOR 1MEG OHM 2W (HV FILTER)	RFO-E105-D	R14-R16
RESISTOR 150K OHM 2W (HV FILTER)	RFC-E154-C	R2-R10
SCREWS SHIPPING (QTY 2) 8-32	HSS-5036	
SCREWS SHIPPING (QTY 2) METRIC	HSS-M031	
SCREWS COVER (QTY 16)	HSA-X001	
SCREWS FRONT PANEL (QTY 6)	HSA-X002	
SHIPPING BOX	ZCX-X127	
SHIPPING FOAM (2 PIECES)	ZFX-X133	
SPARK ARRESTOR 800V (TUBE DECK)	CGX-8010-D	GT1
SWITCH BANDSWITCH	91B-AHX-X001	S1
SWITCH COVER (LID INTERLOCK)		S3
SWITCH MULTIMETER	91B-SWX-X115	SW1

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SWITCH ON/OFF	SWX-X114	S1
SWITCH OPR/STBY	SQR-X109	S2
TRANSFORMER POWER	91B-TPX-X153	T1
TRANSISTOR 2N3904 (CNTRL)	QTX-X104	Q1-Q3,Q5-Q7,Q9-Q14,Q17,Q18,Q20,Q22
TRANSISTOR 2N3906 (CNTRL)	QTX-X109	Q21
TRANSISTOR VN10KM FET (CNTRL)	QTX-X112	Q4,Q16
TRANSISTOR IRF-9630 (CNTRL)	QTX-X173	Q15,Q23
TRANSISTOR IRF-630 (CNTRL)	QTX-X159	Q8
TRANSISTOR MJE802 (CNTRL)	QTX-X101	Q19
TRANSISTOR IRF-830 (HV FILTER)	QTX-X172	Q12
TUBE 4CX800A SVETLANA	91B-VTX-X001	V1,V2
TUBE SOCKET 4CX800A SVETLANA SK1A	VSX-X111	
TUBE STANDOFF 7/16"D 17/16"L	XDX-X144	
VOLT REGULATOR MC78T12CT 12V	UCX-X105	U10
VOLT REGULATOR LM323AT 5V (CNTRL-REPLACEMENT)	UVX-X008	U9
VOLT REGULATOR LM323AT 5V (CNTRL)	UCX-X037	U9